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THE PLANT DISEASE REPORTER

Issued By

Division of Mycology and Disease Survey

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U. S. Department of Agriculture

Volume XXIII Number 12

July 1, 1939

BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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DIVISION OF MYCOLOGY AND DISEASE SURVEY

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O. C. Boyd reports the occurrence of X-disease on Prunus serotina in Massachusetts, page 207. Occurrence on peach and choke cherry in New York is reported in Dutchess County by A. T. Williams, and in Columbia County by S. R. Shapley.

Several reports of unusual occurrence of plant diseases have been received, page 207, including what seems to be the first record of downy mildew on oats in this country, by L. E. Miles; the occurrence of flax wilt in Oregon, by C. E. Owens; and the recurrence of angular leaf spot on tobacco in Louisiana, by I. L. Forbes.

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OCCURRENCE OF SPOTTED WILT IN MISSOURI

John T. Middleton

In the course of an investigation of a disease of gloxinia (Sinningia speciosa) caused by Phytophthora cryptogea, a number of plants exhibiting symptoms of the spotted wilt virus were observed. Plants infected with the virus were grown from corms obtained from Capitola and San Francisco, California. Spotted wilt has frequently been observed on gloxinia grown in these localities from which corms were secured. Spotted wilt did not occur on plants grown from seed procured from the same localities. Since infection was systemic in nature, it is quite apparent that the virus was already present in the corms when received. The spotted wilt virus therefore can remain in a potent state in the underground storage organ of this plant, and upon the resumption of growth of the host plant can induce disease.

The presence of the spotted wilt virus on other plants in Missouri has not been definitely established. Last fall several tomato fruits were received from Northwest Missouri that exhibited symptoms closely resembling those of spotted wilt. It was impossible at that time to establish the exact identity of the virus.

Spotted wilt has also been observed on tuberous begonia (Begonia tuberhybrida) plants grown from corms obtained from the same localities in California as mentioned above. Plants grown from seed were healthy.

(University of Missouri. June 15).

MUCK CROP DISEASES TO DATE IN NEW YORK STATE

A. G. Newhall

The unusually dry weather in May when onions were coming through the ground permitted growers to get the maximum benefit from the formaldehyde drip method of control for onion smut [Urocystis cepulae], even though the cool weather was conducive to heavy smut infections (up to 72 per cent) on untreated check plots. Contrary to usual reports smut was much worse on drier than on the wetter parts of fields this year. The reason is probably to be found in the cold weather prevailing all through the germinating period. The wet areas

did not warm up sufficiently during the day time to permit maximum smut infection while the drier areas did. Felix has pointed out recently that if onions are sown early enough, the low soil temperatures will permit a fairly clean crop to be obtained on smutty land. Soil moisture at this time of year is not a limiting factor for germination of seed.

Onion mildew (Peronospora destructor) was found in Wayne and Tompkins Counties on garden plantings of top-sets, May 19, which is a month later than in 1938 and 1937 on the same plantings. Since this date unusually dry weather has prevailed and probably not more than one or two brief opportunities for secondary infections have occurred. These facts form the basis of a prediction that this disease may be already sufficiently delayed in its progress so that onion yields will not be reduced as much as they have been the past two years. Further evidence of the importance of diseased top-set plantings as sources of primary inoculum for muckland commercial plantings has been discovered by finding such garden plantings less than three-tenths of a mile from certain fields where mildew has repeatedly been found early in the summer. Pathologists and county agents would do well to bear this in mind when trying to account for early mildew outbreaks in the same locality year after year.

Heavy westerly winds whipped out many acres of onions and lettuce on the Elba muck in Genesee and Orleans Counties June 12. Estimates of 20 to 40 per cent loss for the entire area have been made.

Pink root (Phoma terrestris) has been earlier and more widespread than usual on onions, presumably due to the cool weather of May and June. A Pythium has been found associated.

Pythium "stunt" disease of lettuce has again appeared on the early crop of head lettuce, losses as high as 40 per cent occurring in one field pointed out by E. L. Felix near Elba. Specimens of stunt were sent also from Akron, in Erie County.

(Cornell University).

LOSSES FROM POTATO DISEASES IN THE HASTINGS SECTION, FLORIDA, IN 1939

A. H. Eddins

High temperatures and sub-normal rainfall during the growing season of 1939 were unfavorable for some of the potato diseases in the Hastings Section, Florida; consequently, losses amounted to only 11.0 per cent of the crop as compared with the average annual loss of 17.1 per cent for the last eight years (1932-39).

Four diseases, brown rot (Bacterium solanacearum E.F.S.), late blight (Phytophthora infestans (Mont.) D By.), rhizoctonia (Corticium vagum Berk. and Curt.), and leafroll caused 8 per cent of the loss in 1939.

The high temperatures in March and April were favorable for brown rot, and the loss from this disease would have exceeded the 3.0 per cent estimate if the resistant variety, Katahdin, had not been grown on 7,047 of the 13,707 acres planted.

The loss caused by bacterial wilt and soft rot (Phytomonas sepedonica (Spieckermann and Kolthoff) Bergey et al.) was estimated at 0.5 per cent. This loss occurred mostly in 695 acres planted with selected White Rose seed from Minnesota. In the White Rose fields, 11.0 per cent or more of the plants were affected with bacterial wilt and soft rot. The disease was also present in fields planted with some lots of certified Katahdins from New Brunswick, Canada. None of the disease was found in fields planted with certified Spaulding Rose from Maine and Canada.

A trace of hair sprout was found in many fields planted with the different varieties and was most common in the White Rose; the maximum infection observed was 3.2 per cent.

(Florida Agricultural Experiment Station, Hastings).

COTTON DISEASES IN CENTRAL TEXAS

C. H. Rogers

A number of cotton plants were found dead or dying from cotton root rot (Phymatotrichum omnivorum) on May 23. This is one of the earliest records of root rot in cotton for central Texas. A great amount of the cotton was planted earlier than usual in this region. Approximately 3.25 inches of rain fell during the last week in May and the first week in June. The rather large plants and the moist condition of the soil accounted in a large measure for this early infection of root rot. Cotton root rot was found in one field of Hubam clover (Melilotus alba annua) on May 29. By the end of the second week in June from 5 to 10 per cent of all the plants in this field were killed.

Bacterial blight (Bacterium malvacearum) has been rather severe in cotton this spring. In most cases the first five or six true leaves have been shed due to infection by bacterial blight and to heavy infestations of lice.

(Texas Agricultural Experiment Station, Substation No. 5, Temple. June 17).

REPORTS ON X-DISEASE (YELLOW-RED VIROSIS) OF CHERRY AND PEACH

ON WILD CHERRY IN MASSACHUSETTS: O. C. Boyd sent specimens of Prunus serotina affected by X-disease, which apparently has not been reported on this species previously. Dr. Boyd writes, "The disease was common on wild cherry, Prunus serotina, at Sterling, along a road adjacent to X-diseased peach orchards. It was more prevalent on this host than on P. virginiana (choke cherry)." (Massachusetts State College. June 28).

X-DISEASE ON PEACH IN NEW YORK: A. T. Williams reported in the Weekly News Letter for June 26 that a trace of X-disease was noted June 19 in a limited inspection, in Dutchess County. According to S. R. Shapley (June 26), in Columbia County, "The X-disease is being found in more orchards, and those orchards that had some in last year have a much larger amount this year."

ON CHOKE CHERRY IN NEW YORK: In Dutchess County choke cherries infected with the X-disease are now showing a definite bronze to red and yellow color of foliage. (A. T. Williams. July 3).

SOME RECORDS OF FIRST APPEARANCE OR UNUSUAL OCCURRENCE

DOWNY MILDEW ON OATS IN MISSISSIPPI: I am sending some specimens of oats, affected with downy mildew caused by the fungus Sclerospora macrospora. I made a two-day trip through the oat section in the Delta last week and find this trouble rather generally distributed in Sunflower County near Indianola and Inverness. I examined a number of fields in adjacent counties but did not find it. The trouble appears to be confined chiefly to low and poorly drained areas in the field, although it is present to some extent in well drained parts. We have had a very wet season during May and June and this is probably the reason for the trouble being so abundant. This is the first report that I am able to find of this trouble on oats in this country and the first report of the disease on any host, so far as I can find, in Mississippi. (L. E. Miles, Mississippi Agricultural Experiment Station. June 21).

FLAX WILT IN OREGON: On June 1 the writer received specimens of flax seedlings from Yamhill County which showed typical fusarium wilt symptoms. Isolations from these plants gave a culture of Fusarium. The specimens, placed in a moist chamber, soon sporulated profusely, producing a typical Fusarium type of spore. The organism was identified as Fusarium lini. A tube culture of this fungus was sent to Dr. H. H. Flor at the North Dakota State College, who verified the diagnosis, stating that it seemed to be identical with the virulent strains of Fusarium lini isolated from plots on the Station fields at Fargo. (C. E. Owens, Oregon Agricultural Experiment Station. June 30).

BLACKFIRE OF PERIQUE TOBACCO IN LOUISIANA: The disease known as blackfire or angular leaf spot [Bacterium angulatum] of tobacco reappeared in the Perique tobacco-growing area of St. James Parish, Louisiana, in early June, 1939. This is the first report of the disease in Louisiana since 1923, at which time it was quite widespread and destructive. The present outbreak has been reported from only two or three fields to date. One field of about 25 acres visited, at Remy, was so badly diseased that it was being plowed out and destroyed.

Since farmers generally save their own Perique tobacco seed and the blackfire disease has not been reported from Louisiana since 1923, the explanation for the recurrence of the trouble is not at hand. (I. L. Forbes, Louisiana Experiment Station).

BRIEF NOTES ON PLANT DISEASES

STEM NEMATODE IN STRAWBERRY FIELDS IN THE PACIFIC NORTHWEST: This week's survey of strawberry fields, in the Columbia River Valley of Washington, and the Walla Walla River Valley of Oregon, shows many commercial fields heavily infested with stem nematode [Ditylenchus dipsaci]. (M. J. Forsell, Seattle, Washington. May 13).

BACTERIAL WILT ON SWEET CORN IN NEW YORK: (Reports from Weekly News Letter for dates indicated).

Nassau County: Approximately 20 per cent of the plants of susceptible corn varieties have Stewart's disease [Aplanobacter stewarti], but the flea beetles that transmit the disease are rather scarce at the present time. Orson S. Cannon. June 19).

Rockland County: Stewart's disease is present in most fields yet its manifestation is nothing like that of 1937 or even 1938 (June 26). Stewart's disease has increased considerably this week. (William J. Clark. July 3).

Ulster County: A considerable amount of Stewart's disease on sweet corn was observed June 20. (Cyril G. Small. June 26).

DISEASES OF SMALL GRAINS IN CENTRAL TEXAS: Intermittent showers during the last two weeks of May are apparently responsible for rapid spread of stem rust (Puccinia graminis) in grain, especially oats. In a few fields examined there were losses amounting to 2 or 3 per cent. Early infections of leaf and stem rusts were comparatively light. Oat smuts in central Texas have been unusually heavy this year. There was very little rain in this area during the winter and early spring. (C. H. Rogers, Texas Agricultural Experiment Station, Substation No. 5, Temple. June 17).

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